AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (currently amended) Method for ~~spill free refuelling~~ spill-free refueling, the method comprising the steps of:

establishing a ~~liquid tight~~ liquid-tight connection between a nozzle of a ~~refuelling~~ refueling gun ~~nozzle~~ for fuel dispensing and a coupling piece of ~~the~~ a fuel receiving object, ~~through which~~ fuel [[is]] being provided through the fuel receiving object to a fuel container[[,]];

detecting a predetermined fuel level in the fuel container; and

automatically interrupting the fuel flow when said level is detected,

~~characterized by that~~ wherein a level detection ~~signalling~~ signaling configuration for detecting the predetermined fuel level in the fuel container is established by moving the gun (1) into position for establishment of the liquid-tight connection.

2. (currently amended) Method according to claim 1, ~~characterized by that~~ wherein signals (26') for detecting said

predetermined level are transferred to the fuel container (7) from means (26, 27) carried and supported by the gun.

3. (currently amended) Method according to claim 1, ~~characterized by that~~ wherein a signal corresponding to detection of said predetermined level is transferred to receiving means (28, 29), carried and supported by the gun for further processing.

4. (currently amended) Method according to claim 1, ~~characterized by that~~ wherein said predetermined level is detected by means of optical signals.

5. (currently amended) Method according to claim 4, ~~characterized by that~~ wherein optical signals (26') are transferred from an optical ~~fibre~~ fiber (26) and lens (27) arrangement on the gun and optical signals are received by an optical ~~fibre~~ fiber (28) and lens (29) arrangement on the gun.

6. (currently amended) Method according to claim 4, ~~characterized by that~~ wherein optical signals~~, preferably in the form of visible light,~~ are transferred to reflection means (29', 37) in the container, the reflection means being arranged to reflect the optical signals when the fuel level has not reached the reflection means and to transmit a considerable part of the

optical signals when the fuel has reached the reflection means due to a change in refractory configuration, and in[[,]] that the change in reflected signal is taken as an indication for the fuel to have reached the predetermined level.

7. (currently amended) Method according to claim 6, ~~characterized by~~ wherein the reflection means ~~obtaining~~ obtains a ~~certain~~ deviation between transferred optical signals and reflected optical signals ~~by the reflection means~~ so that means for transfer (26, 27) and means for receiving (28, 29) can be positioned close together on the gun~~, a preferred distance (d) between said means being about 6 mm:s~~.

8. (currently amended) Method according to claim 6, ~~characterized by, that~~ wherein reflection of transferred optical signals is obtained by a prism and lens arrangement (37) ~~preferably having an arcshaped configuration and~~ being ~~designed~~ configured so that approximately the same reflection properties are obtained irrespective of where along said arrangement (37) transferred optical signals are coming in, whereby the gun may be applied and turned within a certain angle interval (38) substantially maintaining the effective reflection properties.

9. (currently amended) Method according to claim 6, ~~characterized by, that~~ wherein reflection is obtained by at least one cube corner prism (39).

10. (currently amended) Method according to claim 9, ~~characterized by that~~ wherein reflection is obtained by at least three cube corner prisms arranged in a row.

11. (currently amended) Method according to claim 9, ~~characterized by that~~ wherein each cube corner prism is provided with complementary optics (41) in the form of two lens parts (42, 43) for obtaining a deviation between transferred optical signals and reflected optical signals and for concentration of the reflected optical signals.

12. (currently amended) Method according to claim 8, ~~characterized by that~~ wherein optical signals are transferred through a slit (35) on the fuel receiving object side of the connection, the slit being fixed in relation to the reflection means, the slit setting said angle interval.

13. (currently amended) Method according to claim 1, ~~characterized by, that~~ wherein complete and secure connection between the nozzle and the coupling piece is detected by means of the level detection ~~signalling~~ signaling configuration, ~~which is~~

said configuration being not fully established until said connection is completed.

14. (currently amended) Method according to claim 1, ~~characterized by, that~~ wherein completed and acceptable connection between the nozzle and the coupling piece is indicated by a mechanical indication and release arrangement of the gun by moving a release knob (9) from a release position to a coupling position, release of the connection being initiated by an operator pushing said knob back to the release position.

15. (currently amended) Method according to claim 14, ~~characterized by, that~~ wherein reflected optical signals, are stopped from being communicated to further processing by shutter means (44) of a linkage arm (14) arrangement for the knob when said knob is in the release position, said communication being opened by moving said shutter means when the knob is moved to said coupling position.

16. (currently amended) Method according to claim 1, ~~characterized by, that~~ wherein the fuel connection between the nozzle and the coupling piece is opened in successive steps during the coupling procedure, ~~so that~~ the nozzle ~~opens~~ opening the coupling piece ~~whereafter~~ before the coupling piece opens the

nozzle, and, ~~vice versa~~ when closing, ~~so that~~ the nozzle is closed ~~first whereafter~~ before the coupling piece is closed.

17. (currently amended) Method according to claim 6, ~~characterized by,~~ wherein a fuel pipe (8) ~~carrying~~ carries the reflection means ~~by a fuel pipe (8)~~, the fuel pipe being through which fuel is entered into the fuel container and which ends below said predetermined fuel level (8').

18. (currently amended) Method according to claim 1, ~~characterized by,~~ wherein the level detection signaling configuration comprises a two-way optical communication between an object optical communication unit (45) and an optical control and communication unit (32).

19. (currently amended) System for ~~spill free refuelling~~ spill-free refueling, comprising:

means for establishing a ~~liquid tight~~ liquid-tight connection between a nozzle of a ~~refuelling~~ refueling gun ~~nozzle~~ for fuel dispensing and a coupling piece of ~~the~~ a fuel receiving object, through which fuel is intended to be provided to a fuel container of said object; ~~and further comprising~~ and

means for detecting a predetermined fuel level in the fuel container and for automatically interrupting the fuel flow when said level is detected,

~~characterized by that~~ wherein a level detection ~~signalling~~ signaling configuration for detecting the predetermined fuel level in the fuel container is ~~arranged~~ configured to be established by means of moving said gun (1) into position for establishment of the ~~liquid tight~~ liquid-tight connection.

20. (currently amended) System according to claim 19, ~~characterized by that~~ wherein means (26, 27) carried and supported by the gun are provided for transferring signals (26') for detecting said predetermined level (8') to the fuel container (7).

21. (currently amended) System according to claim 19, ~~characterized by that~~ wherein receiving means (28, 29) carried and supported by the gun are provided for receiving a signal ~~correspond ing~~ corresponding to detection of said predetermined level (8') for further processing.

22. (currently amended) System according to claim 19, ~~characterized by~~ further comprising:

optical signals (26') for detecting said predetermined level.

23. (currently amended) System according to claim 22, ~~characterized by~~ further comprising:

an optical ~~fibre~~ fiber (26) and lens (27) arrangement on the gun for transferring optical detection signals (26')~~;~~ and

an optical ~~fibre~~ fiber (28) and lens (29) arrangement on the gun for receiving optical signals.

24. (currently amended) System according to claim 22, ~~characterized by~~ further comprising:

reflection means (29', 37) arranged in the container (7) for receiving optical signals~~, preferably in the form of visible light,~~ transferred to the container,

the reflection means being arranged to reflect the optical signals when the fuel level has not reached the reflection means and to transmit a considerable part of the optical signals when the fuel has reached the reflection means due to a change in refractory configuration and in that the change in reflected signal is taken as an indication for the fuel to have reached the predetermined level.

25. (currently amended) System according to claim 24, ~~characterized by that~~ wherein the reflection means are arranged so that a certain deviation between transferred optical signals (26') and reflected optical signals is provided, so that means for transfer (26, 27) and means for reception (28, 29) ~~may be~~

~~positioned~~ are postionable close together on the gun~~, a preferred distance (d) between said means being about 6 mm~~.

26. (currently amended) System according to claim 24, ~~characterized by~~ further comprising:

a prism and lens arrangement (37) for reflection of transferred optical signals (26') ~~preferably having an arc shaped configuration and~~ having the same or approximately the same reflection properties irrespective of where along said arrangement transferred optical signals are coming in, whereby the gun may be applied and turned within a certain angle interval (38) substantially maintaining the effective reflection properties.

27. (currently amended) System according to claim 24, ~~characterized by~~ wherein said reflection means comprises at least one cube corner prism (39)~~ comprised by the reflection means~~.

28. (currently amended) System according to claim 27, ~~characterized by~~ wherein said reflection means comprises at least three cube corner prisms arranged in a~~, preferably arc shaped,~~ row ~~comprised by said reflection means~~.

29. (currently amended) System according to claim 27, ~~characterized by that~~ wherein each cube corner prism is provided

with complementary optics (41) in the form of a lens arrangement for obtaining a deviation between transferred optical signals (26') and reflected optical signals (28') and for concentration of the reflected optical signals.

30. (currently amended) System according to claim 29, ~~characterized by that~~ wherein said complementary optics comprise two lens parts (42, 43) arranged on a top surface (40) of a cube corner prism, each ~~part~~ of said two lens parts being a portion of a lens, central portions (42', 43') of said two lens parts abutting each other, ~~with their central portions (42', 43')~~ and being arranged so that optical signals coming in against one ~~part~~ of said two lens parts is reflected through ~~the~~ an other ~~part~~ of said two lens parts, the optical axes of the two lens parts being off-set with respect to each other and the center (39') of the prism.

31. (currently amended) System according to claim 30, ~~characterized by that~~ wherein the general configuration of the two lens parts are off-spherical, whereby the one of said two lens parts ~~being~~ is spherical and ~~one~~ the other of said two lens parts ~~being~~ is cylindrical, or both of said two lens parts ~~being~~ are off-spherical, ~~to a certain extent~~ in order to accumulate lack of tolerances with respect to positioning of the optical signal transfer arrangement.

32. (currently amended) System according to claim 26, ~~characterized by~~ further comprising:

a slit (35) on the fuel receiving side of the connection, through which the optical signals (26', 28') are intended to pass, said slit ~~preferably being arc shaped and being~~ fixed in relation to the reflection means and setting said angle interval.

33. (currently amended) System according to claim 19, ~~characterized by~~ further comprising:

means (28, 44) for detecting complete and secure connection between the nozzle and the coupling piece by means of the level detection ~~signalling~~ signaling configuration, said configuration being fully established when said connection is completed.

34. (currently amended) System according to claim 19, ~~characterized by~~ further comprising:

a mechanical indication and release arrangement of the gun for indication of complete and acceptable connection between the nozzle and the coupling piece[[,]] by moving a release knob (9) from a release position to a coupling position, and release of the connection being initiated by an operator pushing said knob (9) back to the release position.

35. (currently amended) System according to claim 34, ~~characterized by that~~ wherein the release knob (9) is supported by a linkage arm (14) ~~arranged~~ configured to co-act with a release ring (17) tiltably connected to an outer sleeve (18) of the nozzle, said sleeve being intended to be moved towards the coupling piece in relation to the release ring and an inner nozzle part (20) during the nozzle and coupling piece connection procedure, whereby the release ring is tilted and ~~levelled~~ leveled out against a connection sleeve (21) of said inner nozzle part and whereby the release ring turns the linkage arm and the knob to said coupling position and in that, during release of the nozzle from the coupling piece, the linkage arm, by an operator pressing the knob to said release position, being ~~arranged~~ configured to tilt the release ring, which due to its attachment to the outer sleeve is ~~arranged~~ configured to push the connection sleeve towards the nozzle free end and thereby releasing the coupling piece from the nozzle.

36. (currently amended) System according to claim 34, ~~characterized by~~ further comprising:

shutter means (44) of a linkage arm arrangement for said knob, by means of which reflected optical signals are stopped from being communicated to further processing when said knob is in the release position, and in that said communication

is opened by moving said shutter means when the knob is moved to said coupling position.

37. (currently amended) System according to claim 19, ~~characterized by that~~ wherein the fuel connection between the nozzle and the coupling piece is ~~arranged~~ configured so that ~~it~~ the fuel connection is opened in successive steps during the coupling procedure, the nozzle being ~~arranged~~ configured to open the coupling piece and the coupling piece being ~~arranged~~ configured to open the nozzle thereafter and, ~~vice versa~~ when closing, the nozzle ~~being~~ is closed before the coupling piece ~~being~~ is closed.

38. (currently amended) System according to claim 19, ~~characterized by that~~ wherein a fuel pipe (8) is provided[[,]] through which fuel ~~is intended to be entered~~ enters into the fuel container, said pipe acting as a support for ~~the~~ a reflection means (29') and ending below said predetermined level (8').

39. (currently amended) System according to claim 19, ~~characterized by~~ further comprising:

a two-way optical communication between an object optical communication unit (45) of the fuel receiving object carried by the object and an optical control and communication central unit (32).

40. (currently amended) System according to claim 39, ~~characterized by that~~ wherein said two-way optical communication is arranged by means of light decoding and a communication prism (46) co-acting with a dual optical communication ~~fibre~~ fiber (47) connected to the object optical communication unit (45).

41. (currently amended) Method for detecting a predetermined liquid fuel level comprising detecting the liquid level in a container for the liquid and producing an indication signal when said level is reached, ~~characterized by~~ the method comprising the steps of:

[[•]] arranging a transparent prism arrangement (37) in the liquid container (7);

[[•]] providing an optical detection signal (26') falling in against said prism arrangement;

[[•]] reflecting said signal by the prism arrangement and detecting the reflected signal (28');

[[•]] contacting the prism arrangement with the liquid when the predetermined level (8') is reached, whereby the refractory configuration is changed so that the signal to a considerable extent is transmitted into the liquid instead of being reflected;

[[•]] detecting the decrease in reflected light;[[.]]

[[•]]

reflecting said detection signal (26') by at least one cube corner prism (39); and

deviating and concentrating the light reflected by a cube corner prism (39) by means of complementary optics (41) in the form of two lens parts (42, 43) arranged on a top surface (40) of the prism, the lens parts abutting each other by their central parts (42', 43'), and their optical axes (42'', 43'') being off-set with respect to each other and the center (39') of the prism.

42. (currently amended) Method according to claim 41, ~~characterized by that~~ wherein said signals (26', 28') are beams of light~~, preferably visible light~~.

43. (currently amended) Method according to claim 41, ~~characterized by~~ further comprising the step of:

arranging the prism arrangement so that a certain deviation takes place when the signal is reflected.

44. (currently amended) Method according to claims 41, ~~characterized by~~ further comprising the step of:

arranging the prism arrangement together with a lens arrangement (41) in an extended arrangement to provide reflection and deviation for different positions of the detection signal (26') relative to the prism and lens arrangement.

45. (canceled)

46. (currently amended) Method according to claim [[45]] 41, ~~characterized by~~ further comprising the step of:

arranging at least three cube corner prisms in a row.

47. (canceled)

48. (currently amended) Device for detecting a predetermined liquid fuel level, comprising:

- means for detecting the liquid level and for producing an indication when said level is reached, ~~characterized by~~ said means comprising

- reflection means (29') comprising a transparent prism arrangement and a cube corner prism (39) having a top surface (40), the reflection means intended to be disposed in the container[[;]],

- means (26, 27) for providing an optical detection signal (26') intended to enter said prism arrangement[[;]], and

- means (28, 29) for receiving and detecting reflected detection signals (28'); and ~~in that~~

- complementary optics for deviation and concentration of signals in the form of two lens parts (42, 43) arranged on the top surface (40) of the cube corner prism (39), the lens parts

abutting each other by their thickest central parts (42', 43') and their optical axes (42'', 43'') being off-set with respect to each other and the center (39') of the prism,

wherein [[-]]the reflection means are arranged so that detection signals are reflected, when the liquid has not reached the reflection means, and are transmitted into the liquid when the liquid has reached the reflection means due to the change in refractory configuration.

49. (currently amended) Device according to claim 48, ~~characterized by that~~ wherein said signals (26', 28') are beams of~~, preferably visible,~~ light.

50. (currently amended) Device according to claim 48, ~~characterized by that~~ wherein said prism arrangement is arranged so that a certain deviation is obtained between entering signal (26') and reflected signal (28').

51. (previously presented) Device according to claims 48, ~~characterized by~~ further comprising:

a prism arrangement with complementary optics (41), comprising a lens arrangement arranged in an extended arrangement to provide reflection and deviation for different positions of the detection signal (26') relative to the prism and lens arrangement.

52. (canceled)

53. (currently amended) Device according to claim ~~52~~ 48, ~~characterized by that~~ wherein said reflection means comprises at least three cube corner prisms arranged in a~~, preferably arc-shaped,~~ row.

54. (canceled)

55. (currently amended) Device according to claim ~~54~~ 48, ~~characterized by that~~ wherein the optical axis (42'', 43'') of each lens (42, 43) falls within the respective lens material on the prism.

56. (currently amended) Device according to claim ~~54~~ 48, ~~characterized by that~~ wherein the line of cut (39'') between the two lens parts of a prism is directed to the rotation center of the reflection means, ~~these~~ the reflection means being arranged in an arc-shaped configuration.

57. (currently amended) Device according to claim 50, ~~characterized by that~~ wherein~~, due to deviation etc.,~~ the reflection means are arranged to produce two spots, one on each side of the signal transfer arrangement (26, 27), one of said two

spots being intended to fall on the means (28, 29) for receiving reflected detection signals for detection.

58-62 (cancelled).

63. (new) Method according to claim 6, wherein the optical signals are in the form of visible light.

64. (new) Method according to claim 7, wherein a distance (d) between said means for transfer (26, 27) and said means for receiving (28, 29) is about 6 mm.

65. (new) Method according to claim 8, wherein the prism and lens arrangement (37) has an arc-shaped configuration.

66. (new) System according to claim 24, wherein said optical signals are in the form of visible light.

67. (new) System according to claim 25, wherein a distance (d) between said means for transfer (26, 27) and said means for receiving (28, 29) is about 6 mm.

68. (new) System according to claim 26, wherein said prism and lens arrangement (37) has an arc-shaped configuration.

69. (new) System according to claim 28, wherein the at least three cube corner prisms are arranged in an arc-shaped row.

70. (new) System according to claim 32, wherein said slit is arc-shaped.

71. (new) Device according to claim 53, wherein the at least three cube corner prisms are arranged in an arc-shaped row.